

DA70 EFI Data Sheet

70cc Boxer Twin, Electronic Fuel Injected Two Stroke Engine

Featuring:

- 4.2 kW at 8500 RPM
- 5.0 Nm torque from 4500 RPM to 7000 RPM
- 633 g / kWh average BSFC
- 1.8 kg full system weight
- 1-amp peak current draw
- RS-232 and CAN Telemetry



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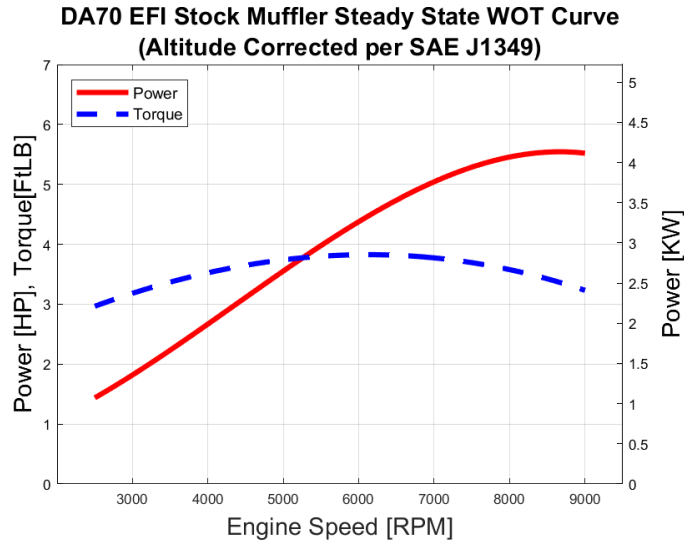


Figure 1: Power curve generated from steady state wide open throttle conditions from 2500 RPM to 9000 RPM in 500 RPM increments. Measured torque was averaged over 30 seconds at each RPM, accounting for all high/low torque spikes that are present in normal operating conditions.

	METRIC	IMPERIAL
DISPLACEMENT	70 cc	4.28 ci
MAX POWER (8500 RPM)*	4.2 kW	5.6 HP
MAX TORQUE (6000 RPM)*	5.1 Nm	3.8 lbft
CONTINUOUS POWER (7000 RPM)*	3.7 kW	5.0 hp
CONTINUOUS TORQUE (7000 RPM)*	5.1 Nm	3.7 lbft
OPERATING RPM RANGE	2000 RPM to 8500 RPM	
AVERAGE BSFC	633 g/kWh	1.04 lb/HPh
WEIGHT (ENGINE WITH THROTTLE BODY)	1.6 kg	3.5 lb
WEIGHT (ECM)	85 g	2.9 oz
WEIGHT (FUEL PUMP)	150 g	5.3 oz
WEIGHT (IGNITION)	150 g	5.3 oz
WEIGHT (WIRE HARNESS/ FUEL LINES)	170 g	6.0 oz
FUEL**	Any Grade Pump Gasoline	
TWO STROKE OIL	Red Line, 40:1 mixture	
REQUIRED OPERATING VOLTAGE	10V to 15V	
CURRENT DRAW	1A Peak	
RECOMMENDED BATTERY	3s or greater LiPo, 1 hour / 1000 mAh	
AMBIENT TEMPERATURE RANGE	0 to 49° C	32 to 120° F

*Stock Muffler **No heavy fuel option at this time

Propeller Recommendations					
2-Blade	Max RPM ± 50	Estimated Max Thrust (lbs) ±5%	3-Blade	Max RPM ± 50	Estimated Max Thrust (lbs) ±5%
24 x 9	8000**	41.82**	20 x 10	7000*	36.12**
24 x 10	7500**	37.91**	22 x 10	6500*	40.47**
25 x 8	8500**	48.92**	22 x 12	5475**	30.03**
26 x 8	8200**	50.58**			

*Recorded from test stand **Simulation Estimate

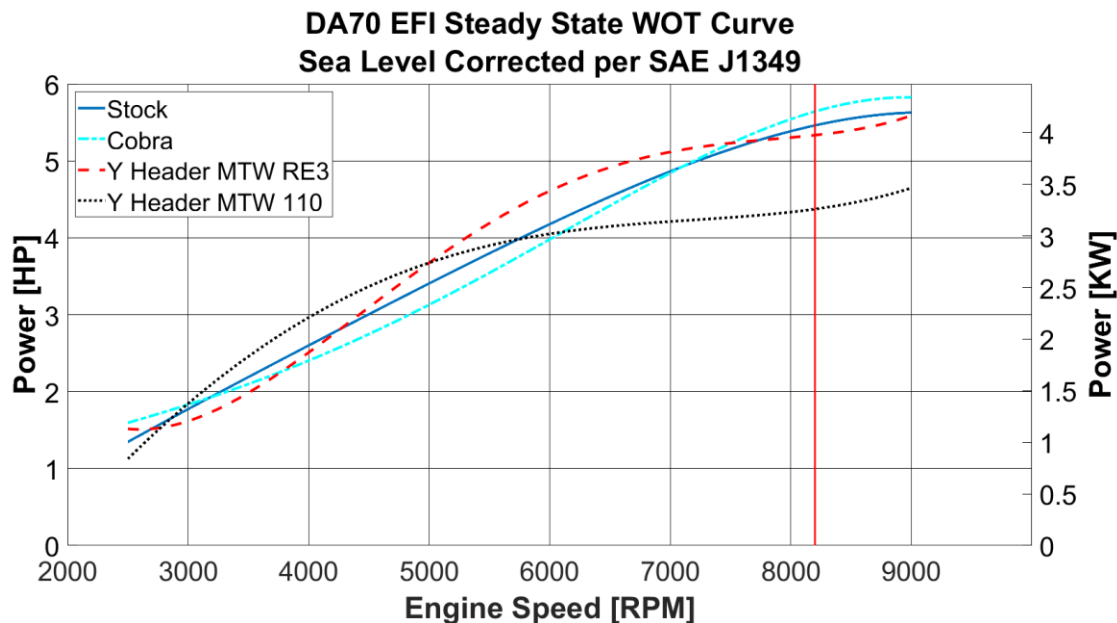


Figure 2: Power comparison of stock muffler, Cobra quiete muffler, Y-header with MTW RE3 tuned pipe, and Y-header with MTW 110 canister.

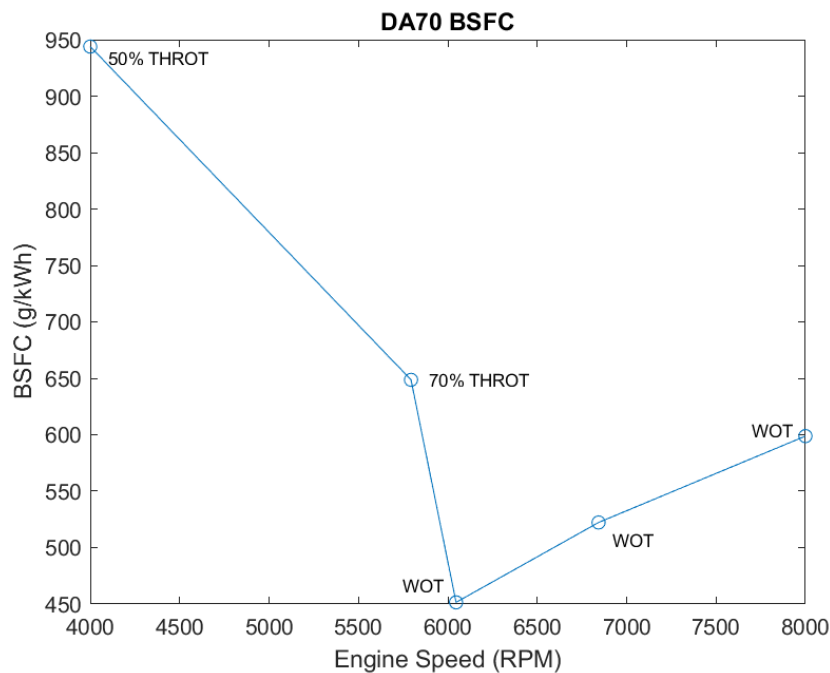
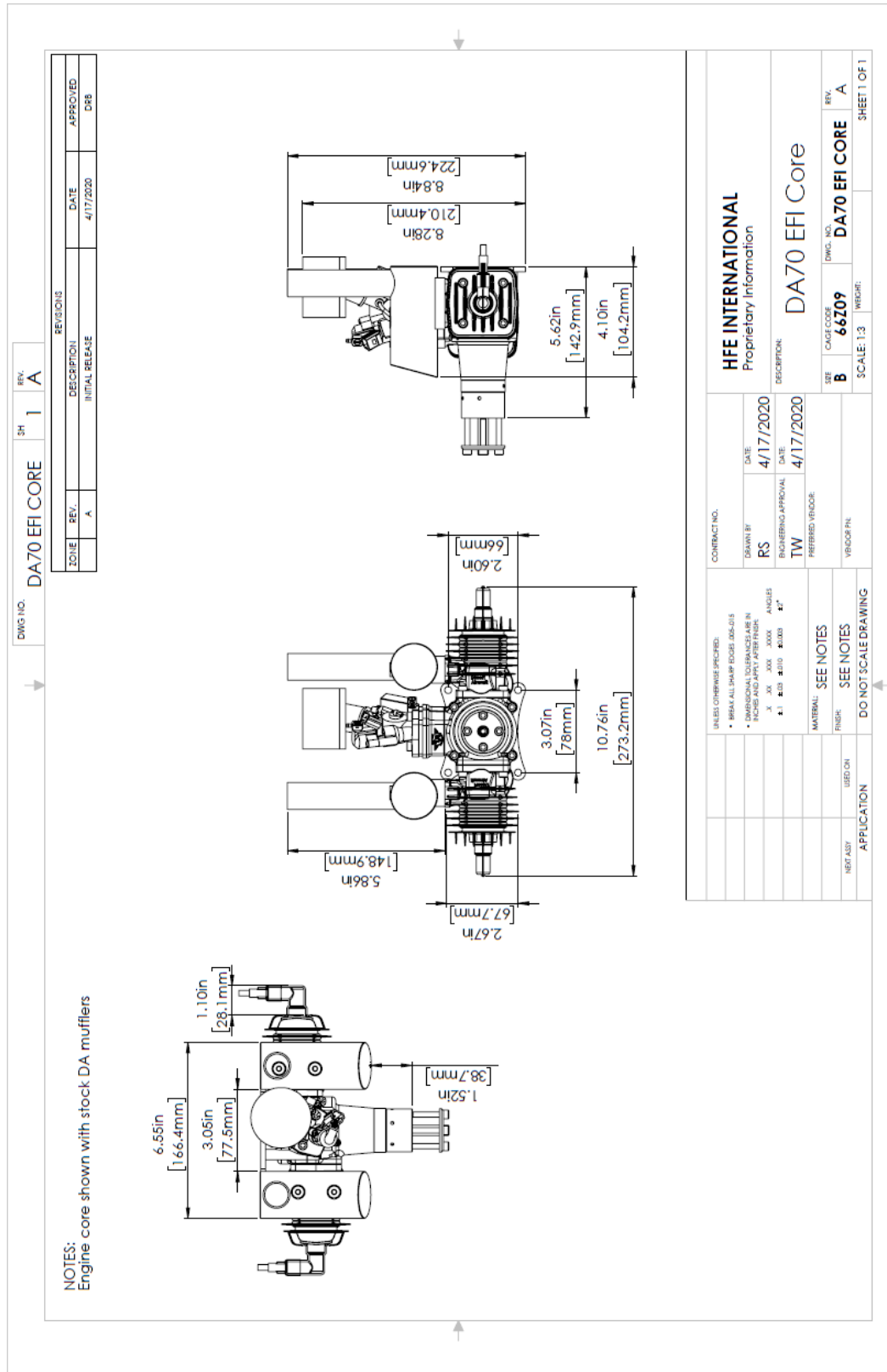


Figure 3: BSFC measured at various throttle positions and RPM replicating propeller load. Fuel consumption measured via gravimetric method.



- Plot for part throttle curves for stock muffler
- Plot for power degradation due to MAT
- Plot for power degradation due to CHT
- Plot for BSFC at RPM and throttle position
- Plot for sound attenuation due to altitude at different RPMs; both stock and quite mufflers
- Isohumidic plot at one RPM and muffler to show humidity factor on sound attenuation.
- Starter/Generator and PMU recommendations
- Power degradation due to altitude